

In the Claims:

Please ~~cancel~~ Claims 2 to 13 and 15 to 22, amend Claims 1 and 14, and add new Claim 23 as follows:

1. (Twice amended) A C8-substituted adenine nucleotide, wherein the adenine nucleotide is substituted at the C8 position with a thioether substituent, wherein the thioether substituent has the structure:

-S-X ;

wherein X is selected from the group consisting of:

- (a)  $C_7H_{13}$  (cycloheptyl)
- (b)  $(CH_3)_3CCH_2$ ; and
- (c)  $CH_3(CH_2)_n$ , wherein  $1 \leq n \leq 5$ .

14. (Twice amended) The adenine nucleotide of claim 1 selected from the group consisting of compound **6a**, compound **6b**, compound **6c**, compound **6d** and compound **6e**.

23. (New) The adenine nucleotide of claim 1, wherein n is selected from the group consisting of 1, 3 and 5.

In the Abstract:

Please amend the Abstract to read as follows:

C8-substituted purine nucleotide analogs, such as ATP analogs, and their use is described, including their use as inhibitors of NTPDases and thereby as tools to modulate the conversion of nucleotides into nucleoside derivatives, and thus modulate the levels of these compounds. Such modulation further provides for the modulation of the activity and function of many processes which are affected by these compounds.